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UTILITY PATENT APPLICATION TRANSMITTAL (Only for new nonprovisional applications under 37 CFR 1.53(b))		Attorney Docket No. TI-31690
First Named Inventor or Application Identifier Nikolaus P.W. Almassy		Title Telephone Personal Information Manager
Express Mail Label No. EL213565165US		

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09/672859

APPLICATION ELEMENTS See MPEP Chapter 600 concerning utility patent application contents		ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231	
1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original, and a duplicate for fee processing)	6. <input type="checkbox"/> Microfiche Computer Program (Appendix)		
2. <input checked="" type="checkbox"/> Specification (preferred arrangement set forth below) - Descriptive title of the Invention - Cross References to Related Applications - Statement Regarding Fed sponsored R&D - Reference to Microfiche Appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claim(s) - Abstract of the Disclosure [Total Pages 30]	7. <input type="checkbox"/> Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) a. <input type="checkbox"/> Computer Readable Copy b. <input type="checkbox"/> Paper Copy (identical to computer copy) c. <input type="checkbox"/> Statement verifying identical of above copies		
3. <input checked="" type="checkbox"/> Drawing(s) (35 USC d113) [Total Sheets 6]			
4. Oath or Declaration [Total Pages 1] a. <input checked="" type="checkbox"/> Newly Executed (original or copy) b. <input type="checkbox"/> Copy from a prior application (37 CFR §1.63(d)) (for continuation/divisional with Box 17 completed) [Note Box 5 below] i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR §1.63(d)(2) and 1.33(b).			
5. <input type="checkbox"/> Incorporation By Reference (useable if Box 4b is checked) The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.			

ACCOMPANYING APPLICATION PARTS	
8. <input type="checkbox"/> Assignment Papers (cover sheet & Documents(s))	
9. <input type="checkbox"/> 37 CFR §3.73(b) Statement (when there is an assignee)	<input checked="" type="checkbox"/> Power of Attorney
10. <input type="checkbox"/> English Translation Document (if applicable)	
11. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449	<input checked="" type="checkbox"/> Copies of IDS Citations
12. <input type="checkbox"/> Preliminary Amendment	
13. <input checked="" type="checkbox"/> 2 Return Receipt Postcards (MPEP 503) (Should be specifically itemized)	
14. <input type="checkbox"/> Small Entity Statement(s)	<input type="checkbox"/> Statement filed in prior application Status still proper and desired (PTO/SB/09-12)
15. <input type="checkbox"/> Certified Copy of Priority Document(s) if foreign priority is claimed	
16. <input checked="" type="checkbox"/> Other: Check # 455317 for \$1,068.00	

17. If a **CONTINUING APPLICATION**, check appropriate box and supply the requisite information below and in a preliminary amendment:
☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: **1**
Prior application information: Examiner Group / Art Unit:

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FEE TRANSMITTAL

Patent fees are subject to annual revision on October 1

These are the fees effective October 1, 1997

Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. See Forms PTO/SB/09-12.**Complete If Known**

Application Number	To be assigned
Filing Date	Herewith
First Named Inventor	Nikolaus Almassy
Examiner Name	Unknown
Group / Art Unit	Unknown
Attorney Docket No.	TI-31690/DOT1420

TOTAL AMOUNT OF PAYMENT (\$)**1068.00****METHOD OF PAYMENT**

- 1.
- ☒
- The Commissioner is hereby authorized to charge to the following Deposit Account,

Deposit Account Number **07-1895**Deposit Account Name **Gray Cary Ware & Freidenrich**

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- Charge any additional fee required or credit any overpayment
- ☐
- Charge all indicated fees and any additional fee required or credit any overpayment

- 2.
- ☒
- Payment Enclosed:**

☒ Check
 ☐ Money Order
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FEE CALCULATION**1. BASIC FILING FEE**

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
101	790	201	395	Utility filing fee	\$690
106	330	206	165	Design filing fee	\$
107	540	207	270	Plant filing fee	\$
108	790	208	395	Reissue filing fee	\$
114	150	214	75	Provisional filing fee	\$
SUBTOTAL (1)					(\$690)

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
41	-20** = 21	18	378
Independent Claims	3	-3** = 0	78 = 0
Multiple Dependent		0	0

**or number previously paid, if greater; For Reissue, see below

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description
103	22	203	11	Claims in excess of 20
102	82	202	41	Independent Claims in excess of 3
104	270	204	135	Multiple dependent claims in excess of 3
109	82	209	41	**Reissue independent claims over original patent
110	22	210	11	**Reissue claims in excess of 20 and over original patent
SUBTOTAL (2)				

(\$378)

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension of time within second month	
117	950	217	475	Extension of time within third month	
118	1,510	218	755	Extension of time within fourth month	
128	2,060	228	1,030	Extension of time within fifth month	
119	310	219	155	Notice of Appeal	
120	310	220	155	Filing a brief in support of an appeal	
121	270	221	135	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,320	241	660	Petition to revive - unintentional	
142	1,320	242	660	Utility issue fee (or reissue)	
143	450	243	225	Design issue fee	
144	670	244	335	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	240	126	240	Submission of Information Disclosure Stmt.	
581	40	581	40	Recording each patent assignment per property (time number of properties)	
146	790	246	395	Filing a submission after final rejection (37 CFR 1.129(a))	
149	790	249	395	For each additional invention to be	

Other fee (specify)

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)**SUBMITTED BY**

Typed or Printed Name

TERRANCE A. MEADOR

Signature

Terrance A. Meador

Date

28 September 2000

Complete (if applicable)

Reg. Number

30,298

Deposit Account User ID

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DATE OF DEPOSIT: 28 September 2000

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Antoinette Littlefield

NAME

Antoinette Littlefield

SIGNATURE

TELEPHONE PERSONAL INFORMATION MANAGER

BACKGROUND OF THE INVENTION

1. Field of the Invention

5 This invention relates generally to telephonic communications and, more particularly, to a personal information manager that organizes telephone call message responses in reaction to such factors as the calling party identity, time of day, and activity level.

2. Description of the Related Art

10 In most state of the art telephones, including mobile station and landline telephones, the identity of the calling party can be established before the telephone is answered. The telephones have access to the current time through the same mechanism (Caller ID). Telephones also have programmable ring tone features. Although a telephone can be
15 individually customized using these mechanisms, there are few features available to permit a telephone to react in response to the identity of the calling party or the time of day. Where these features are available, at least one user-directed or manual step is required in the process. For example, few methods exist to conveniently, automatically, or
20 programmably modify the phone's alerting methods. Neither are there programmable methods of redirecting voice mail based on the user's preferences or calendar entries. Instead, the change of the alerting method must be manually performed each time by the user. The redirection to a voice mail system can typically only be achieved when the
25 telephone is in use, or not answered within a certain number of rings. No

convenient method exists for modifying the voice mail system to respond differently for different callers or different times of day.

It would be advantageous if a telephone user could program a telephone to respond differently for different situations.

5 It would be advantageous if a telephone could be programmed to respond uniquely to each caller.

It would be advantageous if a telephone could be programmed to respond in reaction to the time of day.

10 It would be advantageous if a telephone could modify its behavior and message response in reaction to external events, without immediate user intervention. To that end, it would be advantageous if a telephone's audible ringer could be silenced during times previously selected by the user. Also, it would be desirable if calls could be blocked from a first class of identified calling parties, while other calls permitted
15 to ring through from a second group of identified calling parties.

SUMMARY OF THE INVENTION

Accordingly, a mobile station telephone is provided with data transfer and caller identification capabilities, that is able to modify its
20 response to incoming calls based on external events, such as calendar entries, and the identity of the calling party. A software module, external or internal to the mobile station, with appropriate memory serves as a personal information manager (PIM). The PIM modifies the mobile station's method of alerting the user of an incoming call, depending on the
25 user's preferences. These preferences can be selected by the phone's user through a user interface that is external or embedded into the phone by

combining basic settings regarding alerting and answering methods, such as audible or vibrating answer, voice mail, or busy signal. The user interface information database acts as a calendar, time management system, or secretary.

5 A method is also provided for a mobile station to control the receipt of messages. The method comprises: creating a group of message responses; identifying a calling party; selecting a message response from the group of message responses, in reaction to the identity of the calling party; and, supplying the selected message response.

10 In some aspects of the invention, the message response groups change in reaction to external factors, such as the time of day, communication activity level, or manual selection. Then, the method further comprises: creating a plurality of message response groups; and, selecting a message response group from the plurality of message
15 response groups.

 Creating a group of message responses includes creating a hierarchy of message responses. Then, the method further comprises: creating a hierarchy of priority groups; inserting calling party identities into the priority groups; creating a matrix of the priority group hierarchy
20 cross-referenced to the message response hierarchy; in response to identifying a calling party, locating the calling party in a priority group; and, selecting a message response in reaction to locating the priority group.

25

BRIEF DESCRIPTION OF THE DRAWING

Fig. 1 is a schematic block diagram illustrating the present invention system for controlling the receipt of messages in a wireless communications network.

5 Fig. 2 is a block diagram illustrating a priority group list, such as may be stored in memory for use by the mobile station of Fig. 1.

Fig. 3 is a block diagram illustrating a priority group hierarchy cross-referenced with a message response hierarchy, to form a priority group-message response matrix.

10 Fig. 4 illustrates a program used to select a priority group-message response matrix.

Fig. 5 is a flowchart illustrating the present invention method for a mobile station to control the receipt of messages in a wireless communications network.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

15 Fig. 1 is a schematic block diagram illustrating the present invention system for controlling the receipt of messages in a wireless communications network. The system 10 comprises a mobile station 12 having a wireless communications port to accept calls on line 14, through antenna 16. The mobile station 12 including a microprocessor 18, a software application of machine executable instructions 20, and a memory 22 with a group of message responses. The mobile station 12 identifies a
25 calling party 24, communicating through the wireless network, selects a message response from the group of message responses in memory 22, in

reaction to the identity of the calling party 24. As explained in more detail below, many of the elements identified with the mobile station can be located, and their functions performed, at a remote site.

The mobile station 12 includes an audible indicator 26 for audio alerting, a vibrator indicator 28 for vibration alerting, and a visual display indicator 30 for visual alerting. Thus, the possible message responses include alerting, not alerting, responding with a busy signal, not alerting and recording the message, and forwarding the call to another telephone. Other responses are also possible and the present invention is not necessarily limited to the above-mentioned examples.

One feature of the present invention permits the message response group stored in memory 22 to be a message response group selected from the plurality of message response groups. That is, different message response groups can exist for different situations. For example, the mobile station can be programmed to have a different set of responses in the morning than it has in the afternoon. The message response group, stored in memory 22, is selected in reaction to factors including the time of day, communication activity level, and manual selection. A keyboard 30 creating a signal with configuration of keys, and/or a switch (not shown) can enable the mobile station 12 to manually trigger a change in the stored message response group.

Fig. 2 is a block diagram illustrating a priority group list, such as may be stored in memory for use by the mobile station of Fig. 1. The priority group list includes a plurality of priority groups. Priority groups one, two, and n are specifically shown, where the dotted lines separating priority group two from priority group n are intended to

represent any additional number of priority groups in the list. The present invention is not limited to any particular number of priority groups. Certain calling party identities, such as Bob Jones or selected telephone exchange numbers, are assigned to priority group one. The list
5 is organized so that the entities in priority group one have a higher priority than the entities in priority group two, and group two has a higher priority than group n .

In some aspects of the invention, the wireless communication network provides Caller ID services. Then, the mobile station 12
10 identifies the calling party using the Caller ID services provided by the wireless communications network. Alternately, the mobile station software application 20 identifies a calling party from factors including the complete phone number, local area exchange, area code, the calling party having an unknown number, and the calling party having a blocked
15 number. For example, an unknown or blocked ID number may be put in the lowest priority group n . Certain local exchange numbers or area codes may be given higher priority than other numbers or Caller IDs.

Fig. 3 is a block diagram illustrating a priority group hierarchy cross-referenced with a message response hierarchy, to form a
20 priority group-message response matrix. The mobile station software application 20 (see Fig. 1) creates a matrix of the priority group hierarchy cross-referenced to message response hierarchy. First, the software application locates the calling party in a priority group. In response to the calling party being identified, a message response is selected in reaction to
25 locating the priority group. For example, returning briefly to Fig. 2, the caller is identified as Bob Jones. Therefore, the calling party is located in

priority group one. Returning to Fig. 3, since the caller is located in priority group one, response A is selected. Response A might be to alert the mobile station user using the audible alert.

In some aspects of the invention, the priority group-message response matrix includes an override message response. This is a message response that a selected group of callers is able to trigger, bypassing the normal process of locating the caller in a priority group and providing a message response in reaction to the priority group. The mobile station software application provides the override message response, which bypasses the message response that would normally have been selected in reaction to locating the priority group. As shown in Fig. 3, the message group X override response is response A, which may be to ring the call through using the audible alert. Returning to Fig. 2, an override priority group is shown including calling parties with the authority to trigger the override message response. Further, a code word identity is shown so that the override response can be triggered when the mobile station receives a calling party security code. Thus, override priority calling parties such as Wanda Sims, who are normally given message response *n*, can enter a code word or supply some other kind of stimulus to trigger the override response. In some aspects of the invention even an unknown or unclassified caller is permitted override priority as long as the security code is provided.

In some aspects of the invention, other message response bypasses are available. Returning to Fig. 1, the software application shows the identity of the calling party on the display 30, regardless of the message response selected. The display presents the call to the user in an

unobtrusive manner, so that the user can bypass the automatic mechanism which provides a message response in reaction to locating the caller identity in a priority group. Other non-obtrusive alert mechanisms could also be used, such as a single vibration pulse or a single ring.

5 In some aspects of the invention, the software application 20 adds special identities to the hierarchy of priority groups (see Fig. 2) and cross-references the special identities to message responses (see Fig. 3). The software application locates a calling party identity in the special identities, for example Henry Lee is located as a special identity. A
10 special identity message response is then given in reaction to locating the special identity, prior to locating the calling party identity in a priority group and providing a message response in the normal manner of the invention. This feature may be used for temporary circumstances. For example, if the mobile station user knows that Henry Lee will be on
15 vacation for the next two weeks, an assumption can be made that any calls received from Henry Lee in that two week period will be urgent. Therefore, Henry Lee will receive a response A instead of the normal process response B. After the two week vacation, Henry Lee can be removed as a special identity and will receive the message response
20 accorded a caller located in priority group two. This features saves the user from having to edit the caller identities in the priority groups.

As shown in Fig. 3, a memory can be maintained for a plurality of message response hierarchies. Message response group X, message response group Y, and message response group Z are shown, but
25 the invention is not limited to any particular number. As a result, a priority group-message response matrices are formed, where the priority

group hierarchy is cross-referenced against each of the plurality of message response hierarchies. Therefore, a particular priority group-message response matrix must first be identified for use in cross-referencing the located priority group. The matrix to be used is

5 programmable by the mobile station user.

Fig. 4 illustrates a program used to select a priority group-message response matrix. For example, the user may select the message response group Y responses from 7 AM to 8 AM for the morning commute, and between 12 PM and 6 PM for lunch, afternoon meetings, and the

10 commute home. Message response group X can be selected from 8 AM to 12 PM for the normal office routine, and message group Z selected from 6 PM to 7 AM, when the user is home.

Returning to Fig. 1, in one aspect of the invention, the mobile station memory 22 maintains the priority group-message response

15 matrices, and the software application 20 determines which matrix is to be used. Alternately, the priority group-message response matrices can be maintained at a remote memory 60 having a port to transmit wireless communications with the mobile station. The remote memory 60 can be a service offered by the wireless service provider, or a computer and

20 telephone combination that the mobile station user maintains at home or at work.

Then, the mobile station 12 port accepts a priority group-message response matrix transmitted by the remote memory 60 for storage in the mobile station memory 22. Thus, the mobile station need only store the

25 priority group-message response matrix that is currently in use, so that the mobile station memory and software functions can be simplified.

For example, in some aspects of the invention, the mobile station software application 20 periodically requests the current priority group-message response matrix using a wireless transmission through the communications port. The remote memory 60 transmits the current
5 priority group-message response matrix to the mobile station 12 in response to the request. The mobile station 12 may request the priority group-message response matrix by transmitting a wireless message selected from the group including short message service (SMS) and general message service. Likewise, the remote memory 60 transmits the
10 priority group-message response matrix by wireless communication messages selected from the group including SMS and general message service. A general message service can include data network subscriber protocols such as WAP and HTTP.

Alternately, a switch 30 or keystroke combination may be
15 used to manually request the transmission of the priority group-message response matrix from the remote memory 60. In another aspect, the remote memory 60 is accessible via an Internet address, to receive requests for priority group-message response matrix updates. Then, the mobile station software application 20 includes a lightweight browser to
20 request the current priority group-message response matrix, via a wireless communications from the remote memory having the Internet address.

The mobile station browser 20 can also be used to access the remote memory 60 for the purpose of editing the matrices, modifying the
25 relationships between a priority group and a message response, or the relationship between a calling party identity and a priority group.

Alternately, it may be easier to perform edits of the priority group-message response matrices in remote memory 60 through a landline Internet connection to a personal computer.

Further, a message response software application 62 and
5 microprocessor 64 can be stored and maintained at the remote site, in some aspects of the invention. Thus, the matrices are stored in remote memory 60. The remote software application 62 selects the matrix to be used, locates the identified caller in a priority group, and provides a message response in reaction the priority group. The remote site software
10 application 62 provides a signal to the mobile station 12 that communicates the selected message response. In some aspects the remote site also identifies the caller. Alternately, the mobile station 12 supplies the calling party identity to the remote site.

Although the message control and response system of the
15 present invention has been explained above in the context of a wireless communications network, it is also applicable to landline telephones. In a landline system, the various software, memory, and display functions could be enabled in a mechanism connected to the telephone. Alternately, the handset could be built to incorporate some of the control and response
20 functions. Further, the landline service provider could enable some, or all, of the message response control functions.

Fig. 5 is a flowchart illustrating the present invention
method for a mobile station to control the receipt of messages in a wireless communications network. Although the method is depicted as a sequence
25 of numbered steps for clarity, no order should be inferred from the numbering unless explicitly stated. Step 100 is the start of the method.

Step 102 creates a group of message responses. Creating a group of message responses in Step 102 includes creating message responses selected from the group including audio alerting, visually alerting, vibration alerting, not alerting and responding with a busy signal, not alerting and recording the message, and forwarding the call to another telephone. Step 104 identifies a calling party. In some aspects the wireless communication system provide Caller ID services. Then, identifying the calling party in Step 104 includes using the Caller ID service to identify the calling party. Alternately, identifying a calling party includes determining a calling party identity from factors including the complete phone number, local area exchange, area code, unknown number, and blocked number. Step 106 selects a message response from the group of message responses, in reaction to the identity of the calling party. Step 108 supplies the selected message response.

Some aspects of the invention include further steps. Step 103a creates a plurality of message response groups. Step 103b selects a message response group from the plurality of message response groups. As discussed above in the explanation of Figs. 1-4, different message response groups are created for use in different times of the day, or in different circumstances. That is, selecting a message response group from the plurality of message response groups in Step 103b includes selecting a message response group in reaction to factors including the time of day, communication activity level, and manual selection.

Creating a group of message responses in Step 102 typically includes creating a hierarchy of message responses. Then, the method comprises further steps. Step 102a creates a hierarchy of priority groups.

Step 102b inserts calling party identities into the priority groups. Step 102c creates a matrix of the priority group hierarchy cross-referenced to message response hierarchy. Then, selecting a message response from the group of message responses in Step 106 includes sub-steps. Step 106a
5 locates the calling party in a priority group. Step 106b selects a message response in reaction to locating the priority group.

Some aspects of the invention include further steps. Step 105 receives a calling party security code or other means of overriding the normal message response. In response to receiving the security code, Step
10 110 provides an override message response (regardless of the message response selected in Step 106).

In some aspects of the invention the mobile station includes a display mechanism or some other non-obtrusive alerting mechanism. Then, a further step, Step 112 shows the identity of the calling partying
15 identity, regardless of the message response selected in Step 106.

In some aspects of the invention, creating a hierarchy of priority groups in Step 102a includes adding special identities to the hierarchy of priority groups. Creating a matrix of the priority group hierarchy cross-referenced to message response hierarchy in Step 102c
20 includes cross-referencing the special identities to message responses. Then, selecting a message response from the group of message responses in Step 106 includes other sub-steps. Step 106c, prior to locating a calling party identity in a priority group, locates the calling party identity in the special identities. Step 106d selects a message response in reaction to
25 locating the special identity.

Creating a plurality of message response groups in Step 103a includes creating a plurality of message response hierarchies. Then, the method includes a further step. Step 103a(1) creates matrices of the priority group hierarchy cross-referenced to each of the plurality of message response hierarchies. Then, selecting a message response group from the plurality of message response groups in Step 103b includes identifying the priority group-message response matrix to be used for cross-referencing the priority group in which the calling party identity is located.

In some aspects of the invention a further step, Step 114 edits the matrices to modify a the relationship between a priority group and a message response. Step 116 edits the matrices to modify the relationship between a calling party identity and a priority group.

When the mobile station includes a local memory, a microprocessor, and a software application of microprocessor instructions, the method comprises further steps. Step 103a(2) loads the selected priority group-message response matrix into the local memory. Then, Step 106a includes using the software application to locate the calling party in a priority group stored in the local memory. Step 106b selects a message response stored in the local memory.

In some aspects of the invention, the control and response functions are all substantially embedded in the mobile station. Then, a further step, Step 102d loads the priority group-message response matrices into local memory. Selecting a message response group from the plurality of message response groups in Step 103b includes using the

software application to select a priority group-message response matrix from memory for use in cross-referencing the located priority group.

Alternately, a remote memory is used in the message control and response function. Then, Step 102d loads the priority group-message response matrices into the remote memory. Loading the priority group-message response matrix into local memory includes transmitting the message by wireless communication messages selected from the group including short message service (SMS) and general message services, such as WAP and HTTP data network subscriber protocols. Then, selecting a message response group from the plurality of message response groups in Step 103b includes loading a priority group-message response matrix into local memory from the remote memory for use in cross-referencing the located priority group.

In some aspects of the invention selecting a message response group from the plurality of message response groups in Step 103b includes the mobile station periodically requesting that the current priority group-message response matrix to be loaded into local memory from the remote memory, for use in cross-referencing the located priority group. Alternately, preceding the loading of the priority group-message response matrix into local memory, Step 102d includes the mobile station manually sending a request that the priority group-message response matrix be transmitted.

In some aspects of the invention, the remote memory has an Internet address. Then, selecting a message response group from the plurality of message response groups in Step 103b includes accessing the Internet address to load the priority group-message response matrix into

local memory. When the mobile station includes a software browser application, selecting a message response group from the plurality of message response groups in Step 103b includes using the mobile station browser to access the Internet address through a wireless communications
5 message.

In some aspects of the invention, editing the matrices to modify the relationship between a priority group and a message response in Step 114 includes accessing the remote memory through the Internet address. Likewise, editing the matrices to modify the relationship
10 between a calling party identity and a priority group in Step 116 includes accessing the remote memory through the Internet address.

In some aspects of the invention the software application, microprocessor, and memory are located at a remote site. Then, Step 102d loads the priority group-message response matrices into remote
15 memory. Selecting a message response group from the plurality of message response groups in Step 103b includes using the remote site software application to select a priority group-message response matrix from remote memory for use in cross-referencing the located priority group. Supplying the message response in Step 108 includes supplying
20 the message response to the mobile station from the remote site.

The system and method of the present invention allows a telephone to modify its behavior and response to external events without immediate user intervention. This automatic customization permits more efficient use of the telephone. One application is the automatic silencing
25 of the phone's audible ringer during times that have been previously selected by the user. Other applications permit the blocking of only

certain callers during meetings, and other activities, that may warrant a modified response to incoming calls. Although examples of the present invention have been given in the context of a wireless communications network, the invention is equally applicable to landline and Internet
5 telephones systems. Most of the examples depict the invention systems as being co-located with the mobile station. Some, or all, the control and message response functions can be performed at a site remote from the mobile station, however, such as by the service provider. Other variations and embodiments will occur to other skilled in the art in light of the
10 above-mentioned examples.

WE CLAIM:

CLAIMS

1. In a wireless communications network, a method for a mobile station to control the receipt of messages, the method comprising:

creating a group of message responses;

5 identifying a calling party;

selecting a message response from the group of message responses, in reaction to the identity of the calling party; and

supplying the selected message response.

10 2. The method of claim 1 wherein creating a group of message responses includes creating message responses selected from the group including audio alerting, vibration alerting, not alerting and responding with a busy signal, not alerting and recording the message, and forwarding the call to another telephone.

15 3. The method of claim 2 further comprising:

creating a plurality of message response groups; and

selecting a message response group from the plurality of message response groups.

20 4. The method of claim 3 wherein selecting a message response group from the plurality of message response groups includes selecting a message response group in reaction to factors including the time of day, communication activity level, and manual selection.

25

5. The method of claim 4 wherein creating a group of message responses includes creating a hierarchy of message responses; and

the method further comprising:

5 creating a hierarchy of priority groups;
 inserting calling party identities into the priority groups;
 creating a matrix of the priority group hierarchy cross-referenced to message response hierarchy; and

 wherein selecting a message response from the group of
10 message responses, in reaction to the identity of the calling party, includes:

 locating the calling party in a priority group; and
 selecting a message response in reaction to locating the
priority group.

15

6. The method of claim 5 further comprising:
 receiving a calling party security code;
 in response to receiving the security code, providing an
override message response.

20

7. The method of claim 5 wherein the mobile station has a display mechanism, and further comprising:
 showing the identity of the calling party, regardless of the
selected message response.

25

8. The method of claim 5 wherein creating a hierarchy of priority groups includes adding special identities to the hierarchy of priority groups;

wherein creating a matrix of the priority group hierarchy cross-referenced to message response hierarchy includes cross-referencing the special identities to message responses; and

wherein selecting a message response from the group of message responses, in reaction to the identity of the calling party, includes:

prior to locating a calling party identity in a priority group, locating the calling party identity in the special identities; and

selecting a message response in reaction to locating the calling party in the special identities.

9. The method of claim 8 wherein creating a plurality of message response groups includes creating a plurality of message response hierarchies; and

the method further comprising:

creating matrices of the priority group hierarchy cross-referenced to each of the plurality of message response hierarchies; and

wherein selecting a message response group from the plurality of message response groups includes identifying the priority group-message response matrix to be used for cross-referencing the located priority group.

10. The method of claim 9 further comprising:
editing the matrices to modify a relationship between a
priority group and a message response.

5 11. The method of claim 10 further comprising:
editing the matrices to modify the relationship between a
calling party identity and a priority group.

12. The method of claim 9 in which the mobile station
10 includes a local memory, a microprocessor, and a software application of
microprocessor instructions; and
the method further comprising:
loading the selected priority group-message response matrix
into the local memory; and
15 wherein locating the calling party in a priority group
includes locating the calling party in a priority group stored in the local
memory; and
wherein selecting a message response in reaction to locating
the priority group includes selecting a message response stored in the
20 local memory.

13. The method of claim 12 further comprising:
loading the priority group-message response matrices into
local memory; and
25 wherein selecting a message response group from the
plurality of message response groups includes using the software

application to select a priority group-message response matrix from memory for use in cross-referencing the located priority group.

14. The method of claim 12 wherein a remote memory is
5 included, and further comprising:
loading the priority group-message response matrices into
the remote memory; and
wherein selecting a message response group from the
plurality of message response groups includes loading a priority group-
10 message response matrix, into local memory from the remote memory, for
use in cross-referencing the located priority group.

15. The method of claim 14 wherein selecting a message
response group from the plurality of message response groups includes the
15 mobile station periodically requesting that the current priority group-
message response matrix be loaded into local memory from the remote
memory.

16. The method of claim 14 wherein loading the priority
20 group-message response matrix into local memory includes transmitting
the message by wireless communication messages selected from the group
including short message service (SMS) and general message service.

17. The method of claim 14 further comprising:

preceding the loading of the priority group-message response matrix into local memory, manually sending a request that the priority group-message response matrix be transmitted.

5

18. The method of claim 14 wherein the remote memory has an Internet address, and wherein selecting a message response group from the plurality of message response groups includes accessing the Internet address to load the priority group-message response matrix into
10 local memory.

19. The method of claim 18 in which the mobile station includes a software browser application, and wherein selecting a message response group from the plurality of message response groups includes
15 using the mobile station browser to access the Internet address through a wireless communications message.

20. The method of claim 18 wherein editing the matrices to modify the relationship between a priority group and a message
20 response group includes accessing the remote memory through the Internet address; and

wherein editing the matrices to modify the relationship between a calling party identity and a priority group includes accessing the remote memory through the Internet address.

25

21. The method of claim 9 in which a remote site memory, software application of machine executable instructions, and microprocessor are included; and

the method further comprising:

5 loading the priority group-message response matrices into remote memory; and

wherein selecting a message response group from the plurality of message response groups includes using the remote site software application to select a priority group-message response matrix from remote memory for use in cross-referencing the located priority group; and

wherein supplying the message response includes supplying the message response to the mobile station from the remote site.

15 22. The method of claim 1 in which the wireless communication system provides Caller ID services; and

wherein identifying the calling party includes using the Caller ID service to identify the calling party.

20 23. The method of claim 1 wherein identifying a calling party includes determining a calling party identity from factors including the complete phone number, area code, unknown number, and blocked number.

25 24. In a wireless communications network, a system to control the receipt of messages, the system comprising:

a mobile station having a wireless communications port to accept calls, the mobile station including a microprocessor, a software application of machine executable instructions, and a memory with a group of message responses, the mobile station identifying a calling party
5 and selecting a message response from the group of message responses, in reaction to the identity of the calling party.

25. The system of claim 24 wherein the mobile station further includes indicators selected from the group including audible
10 indicators, vibrator indicators, and a visual display indicators; and
wherein message responses include responses selected from the group including:

using an indicator to alert, not using an indicator to alert, responding with a busy signal, not alerting and recording the message,
15 and forwarding the call to another telephone.

26. The system of claim 24 wherein the stored message response group is a message response group selected from a plurality of stored message response groups.

27. The system of claim 26 wherein the mobile station further includes a switch; and
wherein the message response group stored in memory is selected in reaction to factors including the time of day, communication
25 activity level, and manual selection using the switch.

28. The system of claim 27 wherein the memory includes calling party identities being stored in priority groups;

wherein the software application creates a matrix of the priority group hierarchy cross-referenced to the message response

5 hierarchy, the software application locating the calling party in a priority group, in response to the calling party being identified, and selecting a message response in reaction to locating the priority group.

29. The system of claim 28 wherein the mobile station
10 memory includes an override priority group;

wherein the mobile station receives a calling party security code to trigger the override priority group; and

wherein the software application provides the override message response from memory in response to receiving the security code.

15

30. The system of claim 28 wherein the mobile station further includes a display; and

wherein the software application shows the identity of the calling party on the display, regardless of the message response selected

20 in reaction to locating the priority group.

31. The system of claim 28 wherein special identities to the hierarchy of priority groups are stored in memory and cross-referenced to message responses; and

wherein the software application locates a calling party identity in the special identities and selects a message response in reaction to locating the special identity.

5 32. The system of claim 31 wherein the memory includes a plurality of message response hierarchies, and matrices of the priority group hierarchy cross-referenced to each of the plurality of message response hierarchies; and

10 wherein the software application identifies the priority group-message response matrix to be used for cross-referencing the located priority group.

15 33. The system of claim 32 further comprising:
a remote memory including matrices of priority group-message responses, the remote memory having a port to transmit wireless communications; and

20 wherein the mobile station port accepts a priority group-message response matrix transmitted by the remote memory for storage in the mobile station memory.

34. The system of claim 33 wherein the mobile station software application periodically requests that the current priority group-message response matrix in a wireless transmission through the communications port; and

wherein the remote memory transmits the current priority group-message response matrix to the mobile station in response to the request.

5 35. The system of claim 34 wherein the mobile station request of the priority group-message response matrix is transmitted with a wireless message selected from the group including short message service (SMS) and general message service; and

 wherein the remote memory transmits the priority group-
10 message response matrix by wireless communication messages selected from the group including SMS and general message service.

 36. The system of claim 34 wherein the mobile station switch is used to manually request the transmission of the priority group-
15 message response matrix from the remote memory.

 37. The system of claim 34 wherein the remote memory is accessible through an Internet address; and

 wherein the mobile station includes a browser to request the
20 current priority group-message response matrix, via a wireless communications to the remote memory Internet address.

 38. The system of claim 37 wherein the mobile station browser is used to access the remote memory, to edit the matrices,
25 modifying the relationships between a priority group and a message

response, and to modify the relationship between a calling party identity and a priority group.

39. The system of claim 24 in which the wireless
5 communication network provides Caller ID services; and
wherein the mobile station identifies the calling party using
the Caller ID services provided by the wireless communications network.

40. The system of claim 24 wherein the mobile station
10 software application identifies a calling party from factors including the
complete phone number, local area exchange, area code, unknown
number, and blocked number.

41. In a wireless communications network, a system to
15 control the receipt of messages, the system comprising:
a mobile station having a wireless communications port to
accept calls; and
a remote site having a wireless communication port, a
microprocessor, a software application of machine executable instructions,
20 and a memory including a group of message responses, the remote site
selecting a message response from the group of message responses in
reaction to the identity of the calling party, and the remote site
communicating the selected response to the mobile station.

###

TELEPHONE PERSONAL INFORMATION MANAGER

ABSTRACT OF THE INVENTION

A personal information manager (PIM) has been provided for
5 use in controlling telephone call message responses for a wireless
communications network mobile station telephone. The PIM permits a
telephone user to program a unique response for each calling party.
Typical responses including the normal audible alert, automatically
transferring the call to voice mail, and silent ringing with no voice mail, to
10 name but a few options. In addition, the matrix of calling parties and
corresponding message responses can be modified for different times of
the day or circumstances. For example, the PIM can be programmed to
deliver a different set of responses during normal work hours than the
responses provided at night, or during a business meeting.

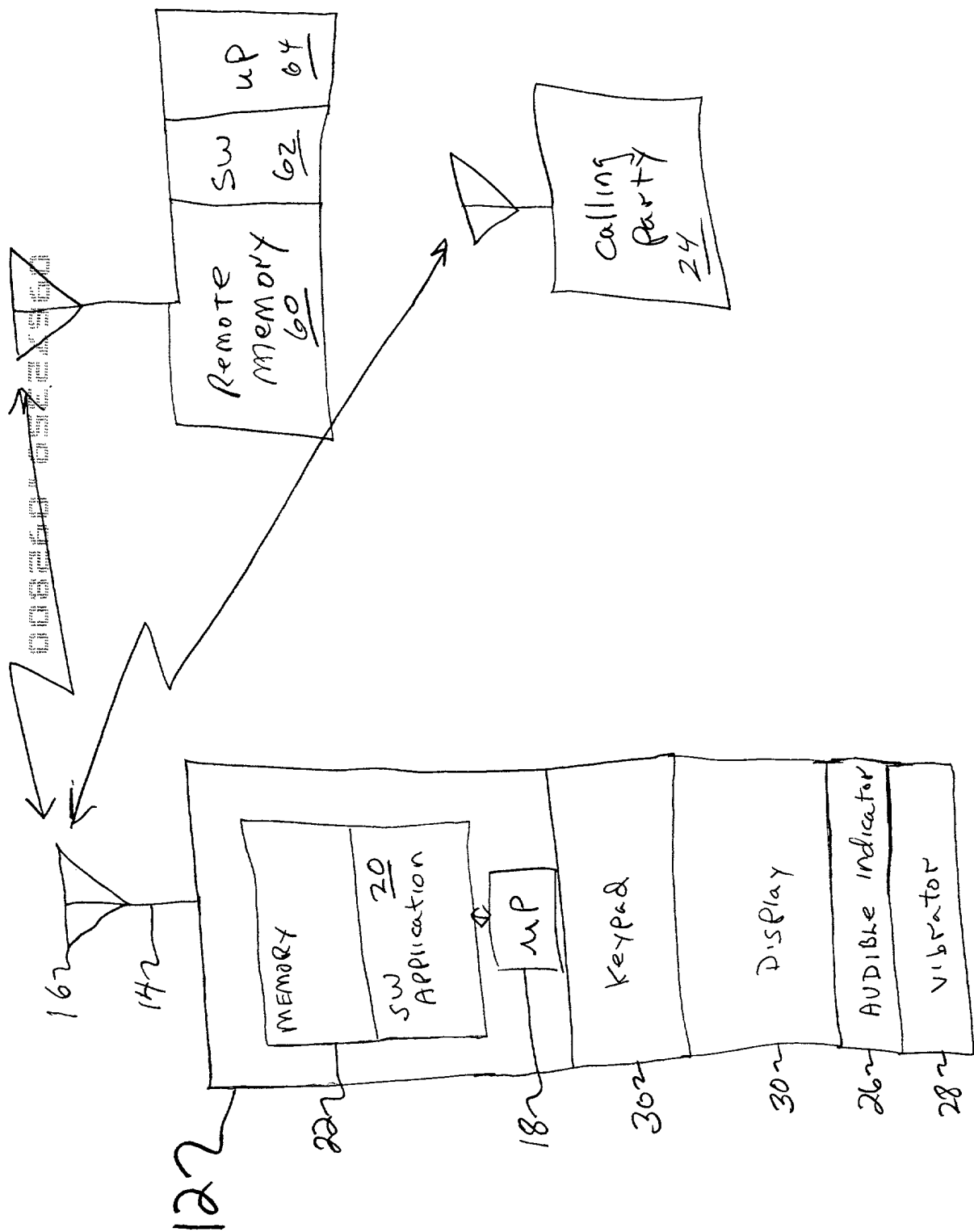


Fig. 1

Priority group Calling Party "identities"

Priority group 1	Bob Jones	Albert Smith	858-272-xxxx	
Priority group 2	Henry Lee	716-xxx-xxx		
,	,	,	,	
,	,	,	,	
,	,	,	,	
Priority group n	Wanda Sims	caller ID blocked		
override priority group	Wanda Sims	Bob Jones	security code	
special identity 1	Henry Lee			

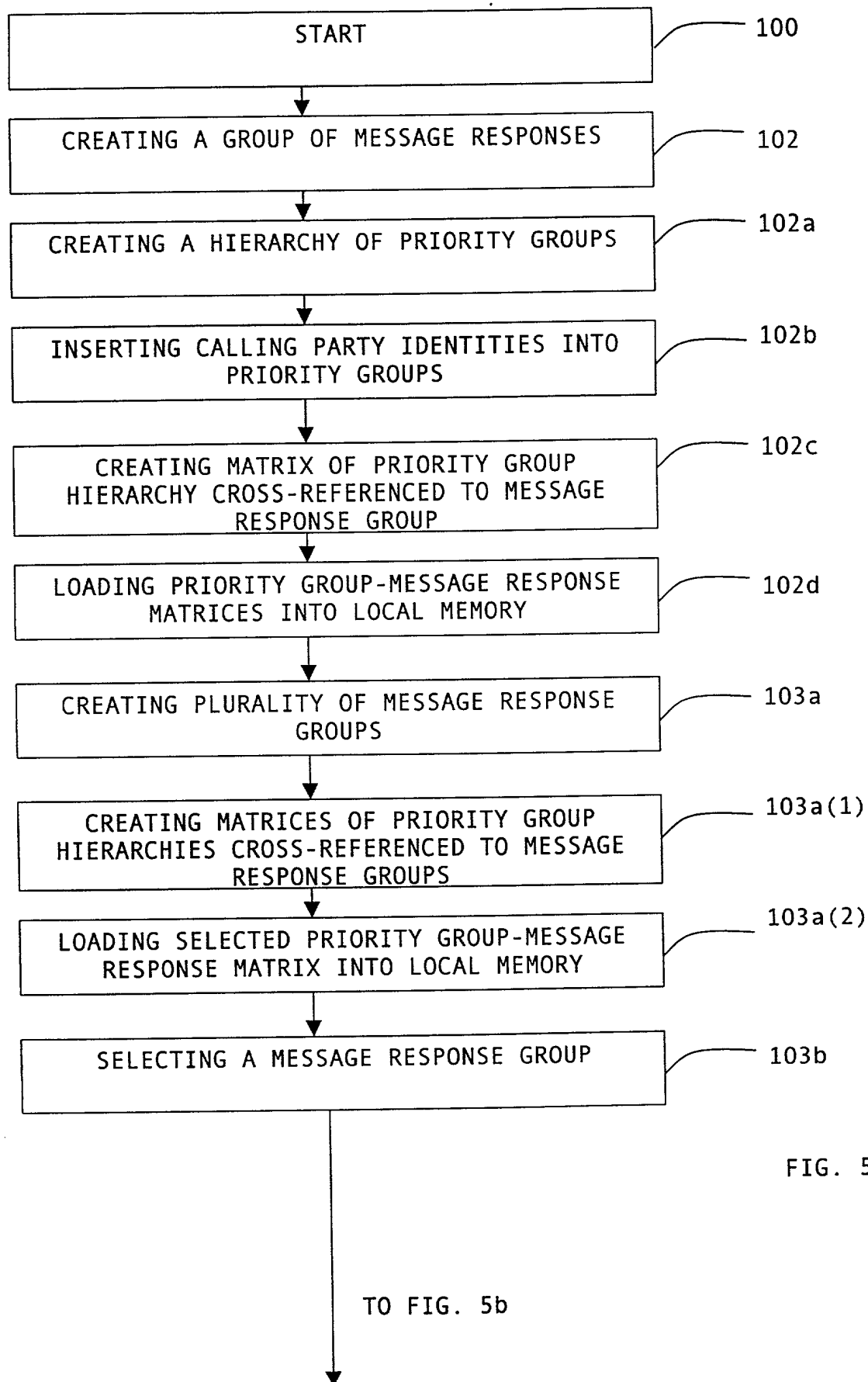
Fig. 2

Fig. 3

Priority group hierarchy	Message response group X	Message response group Y	Message response group Z
Priority group 1	Response A	Response B	Response C
Priority group 2	Response B	Response C	Response n.
,	,	,	,
,	,	,	,
,	,	,	,
Priority group n	Response n	Response n+1	Response n+1
override priority group	Response A	Response A	Response A
Special identity	Response A	Response B	Response C

Time	Message Response Group
7AM - 8AM	X
8AM - NOON	X
NOON - 6 PM	Y
6PM - 7AM	Z

Fig. 4



FROM FIG. 5a

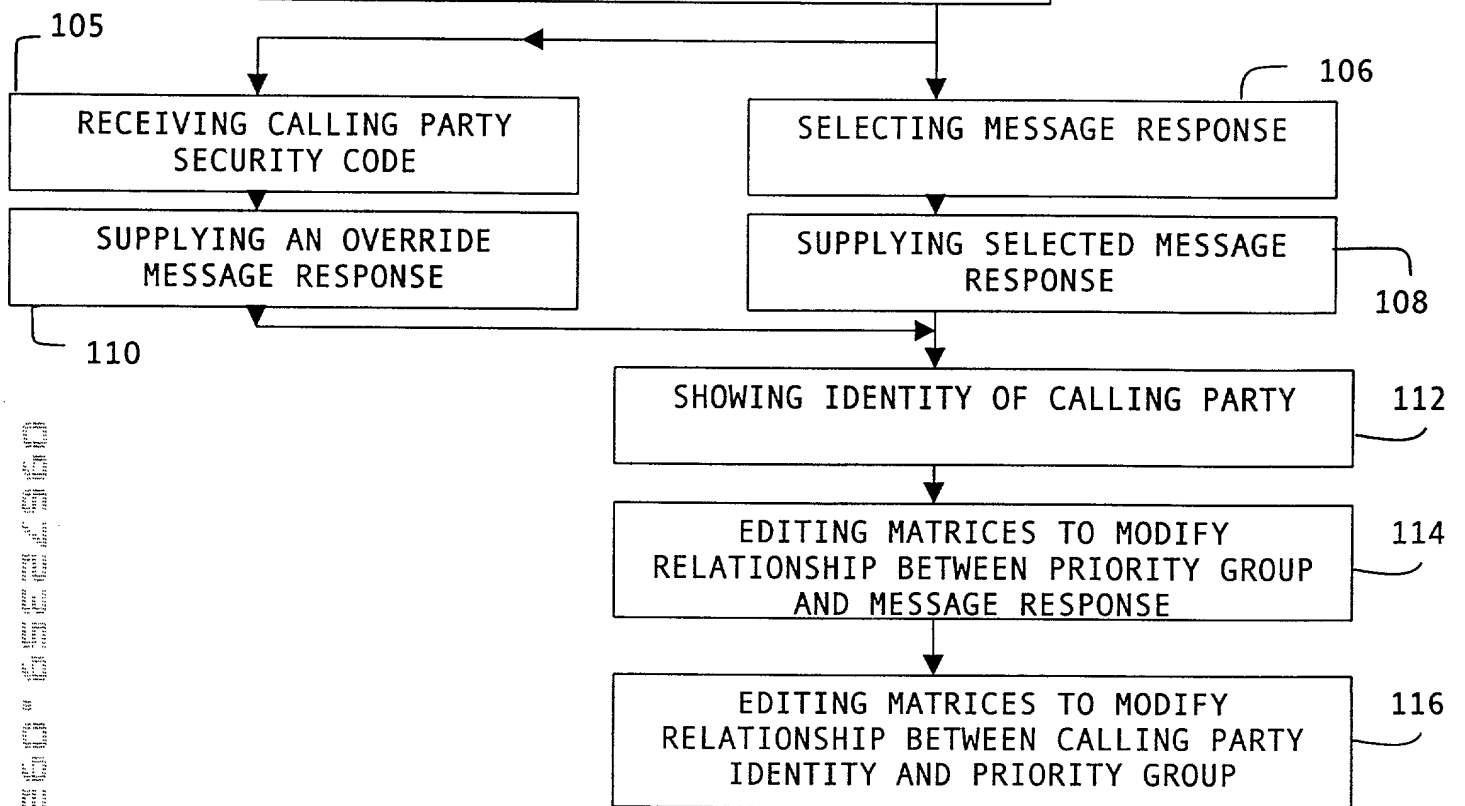


FIG. 5b

ATTORNEY'S DOCKET NO.

TI -31690

APPLICATION FOR UNITED STATES PATENT

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I declare that my residence, post office address and citizenship are as stated below next to my name; that I verily believe that I am the original, first and sole inventor if only one name is listed below, or an original, first and joint inventor if plural inventors are named below, of the subject matter which is claimed and for which a patent is sought on the invention entitled as set forth below, which is described in the attached specification; that I have reviewed and understand the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration; that no application for patent or inventor's certificate on this invention has been filed by me or my legal representatives or assigns in any country foreign to the United States of America; and that I acknowledge my duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, section 1.56.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

TITLE OF INVENTION: **TELEPHONE PERSONAL INFORMATION MANAGER**

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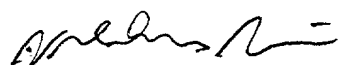
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DATE:

9. 28. 2000

DATE:

DATE: